Amanda Doucette

hi@amandadoucette.com

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EDUCATION

2020 – pres. McGill University
PhD Student, Linguistics

2013 – 2017 University of Massachusetts Amherst
B.A. Linguistics, Summa Cum Laude
Commonwealth Honors College Honors with Greatest Distinction

2013 – 2017 University of Massachusetts Amherst
B.S. Computer Science, Summa Cum Laude
Commonwealth Honors College Honors with Greatest Distinction

RESEARCH INTERESTS

I am interested in how machine learning - mainly artificial neural networks - can be used to model language learning and linguistic representation in the human brain. Specifically, I am interested in the process of learning phonological features and how distributed feature representations can be used to model results of human learning experiments.

PUBLICATION

2017 Doucette, Amanda (2017). **Inherent Biases of Recurrent Neural Networks for Phonological Assimilation and Dissimilation.** Proceedings of the 7th Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2017), 35–40. *https://www.aclweb.org/anthology/W17-0705/*

PRESENTATIONS

2022 **Identity, Similarity, and the OCP: A model of co-occurrence in 107 languages.** Amanda Doucette, Morgan Sonderegger, Timothy J. O'Donnell, and Heather Goad. LabPhon 18. June 25, 2022.

2019 **Introduction to AI and Machine Learning.** Osaka College of Design and IT. Los Angeles, CA. November 15, 2019. Part of a visit to US tech companies.

2019 **Introduction to AI and Machine Learning.** Soho House Ludlow Tech Club. New York, NY. May 14, 2019.

TEACHING

2021 Teaching Assistant, **McGill University.**
Introduction to Linguistics (LING 201), Winter 2022.
Instructors: Francisco Torreira and Martina Martinović.

2021 Teaching Assistant, **McGill University.**
Language Acquisition 1 (LING 355), Fall 2021.
Instructor: Heather Goad.

EMPLOYMENT

2020 Senior Software Engineer, **Originate, Inc.**

2017 – 2020 Software Engineer, **Originate, Inc.**
Worked with a team of engineers and designers on software products for companies in a variety of industries, wrote backend, frontend, and machine learning code in Node.js, Python, Go, and Rust, reviewed and provided feedback on other engineers' code, set up continuous integration testing and deployment processes, developed neural network models for machine learning research projects, and discussed applications of AI and machine learning with sales and business development staff.

2015 Information Technology Leadership Program Intern, **EMC**
Managed @EMCSupport Twitter account, wrote Python scripts and Excel macros to maintain and update analytics spreadsheets and data visualizations.

2014 – 2015 Contract Linguist, **Appen Butler Hill**
Wrote phonetic transcriptions of various spoken and written language for language technology projects.

RESEARCH ASSISTANTSHIPS

2014 – 2017 REU, **Computing Constraint-based Derivations: Phonological Opacity and Hidden Structure Learning.** NSF Grant 1424077. (Joe Pater)
Researched computational models of phonological pattern learning and representation of features and constraints for modeling phonological learning, researched examples of opaque phonological patterns in several languages for a database, implemented a harmonic grammar solver with linear programming, and began implementation of a typology calculator for harmonic grammar learning problems in Python.

2015 – 2017 Research Assistant, **UMass Cognitive Science of Language Lab.** (Brian Dillon)
Wrote Python software for processing eye-tracking while reading data, wrote stimuli sentences and questions for sentence processing experiments, and ran eye-tracking and self-paced reading studies.

2013 – 2017 Research Assistant, **UMass Phonetics Lab.** (John Kingston)
Ran eye-tracking and speech perception experiments, wrote code for running behavioral experiments, and participated in lab meeting discussions.

SOFTWARE

2013 – pres. Amanda Doucette, Brian Dillion, and Elizabeth Schotter. **SideEye.**
Open-source Python package for processing raw data from eye-tracking while reading experiments and calculating dependent measures for analysis.
https://pypi.org/project/sideeye

VOLUNTEER SERVICE

2017 Volunteer Teacher**, Boys & Girls Club of Greater Holyoke, MA.**
Designed and taught a one semester weekly Lego robotics class for middle school students. Course included basic programming concepts, problem solving exercises, and presentations of current robotics research, with a focus on researchers from diverse backgrounds.

AWARDS

2022 – 2026 **Bourse de doctorat en recherche (Doctoral Research Scholarship).**
Fonds de recherche du Québec – Société et culture. June 2, 2022. $84,000 CAD.

2022 **Graduate Student Travel Award (for LabPhon 18).**
CRBLM. April 26, 2022.

2020 – 2023 **Richard H. Tomlinson Doctoral Fellowship.**
McGill University. July 6, 2020. $35,000 CAD/year, 3 years.

2017 **Outstanding Achievement Award in Information and Computer Sciences.**
University of Massachusetts Amherst. May 12, 2017.

2013 – 2017 **Dean's List Honors.**
University of Massachusetts Amherst. Fall 2013 – Spring 2017.

2016 **Phi Beta Kappa Honor Society.**
University of Massachusetts Amherst. Inducted May 6, 2016.

2015 **Course Citation, COMPSCI 311: Introduction to Algorithms.**
University of Massachusetts Amherst. Fall 2015.

2015 **UMass Fencing Club Best Novice Award.**
University of Massachusetts Amherst. April 2015.

2015 **Course Citation, COMPSCI 250: Introduction to Computation.**
University of Massachusetts Amherst. Spring 2015.

2014 – 2015 **Rachel and John Morton Honors Scholarship.**
University of Massachusetts Amherst. April 25, 2014.